Communicable Disease Report

Hawai'i Department of Health
Communicable Disease Division

http://www.state.hi.us/doh/resource/comm_dis/cdr.html

November/December 2003

Epidemiology of Tuberculosis, 2002: Hawaii vs. the United States

Over the past decade, the State of Hawai`i has consistently reported one of the highest annual tuberculosis (TB) case rates in the country. In 2002, Hawai`i again led the nation in state TB case rates, with 11.9 new cases per 100,000 population and 148 total cases. Although case rates have decreased steadily from a high of 23.5/100,000 in 1992, Hawai`i's TB case rate in 2002 was still more than double the national case rate (see Figure 1). Nationally, there were 15,075 total TB cases in 2002, giving a TB case rate of 5.2 cases/100,000 (CDC, 2003).

Cases by County

The City and County of Honolulu continues to report the highest number of TB cases in the state, with 121 cases of TB and an incidence rate of 13.8 cases per 100,000 population, accounting for 82% of the state's TB morbidity in 2002. Maui County reported 14 cases of TB (incidence rate: 10.9 cases per 100,000 population), Hawai`i County reported 9 cases of TB (incidence rate: 6.1 cases per 100,000 population), and Kaua`i County reported 4 cases of TB (incidence rate: 6.8 cases per 100,000 population).

Fatalities

Since the development of antibiotics to treat active TB disease in the 1940s, death rates from TB have fallen in Hawai`i as well as nationally. There were two reported deaths from TB last year in Hawai`i, giving a mortality rate of 0.2 deaths per 100,000 population. In comparison, the national TB mortality rate was 0.3 deaths per 100,000 population, or 749 total TB deaths in the US in 2001 (CDC, 2003).

Cases by Age

Most of the new TB cases reported in Hawai`i are in older age groups. In 2002, 30% (n=44) were between the ages of 45 to 64 years, and 30% (n=45) were 65 years and older. Many of these cases contracted latent TB infection (LTBI: see "Definitions" box) in other countries and are now developing active TB disease due to waning immunity. Similarly, most pediatric TB cases in Hawai`i

Definitions:

Latent TB infection (LTBI)
- Infected with Mycobacterium tuberculosis but asymptomatic
- Has positive tuberculin skin test (TST): generally 10 mm induration
- Usually has normal chest x-ray
- Not infectious
- Not reported to Department of Health (DOH) or CDC

Active TB disease (TB case)
- Infected with M. tuberculosis and usually symptomatic
- Usually has positive TST (10 mm)
- Usually has abnormal chest x-ray
- Potentially infectious
- Reported to DOH and CDC

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occurred in non US-born children or children of recent immigrants. The majority of pediatric cases were from the Philippines and the Compact of Free Association (COFA) nations: Republic of Marshall Islands, Federated States of Micronesia, or Palau. There were ten new cases of TB under 20 years of age at diagnosis: three under 5 years of age, three from 5-14 years, and four from 15-19 years. The majority of TB cases reported in the US in 2002 were younger: 35% were from 25 to 44 years of age (CDC, 2003).

Disease by Organ System

Eighty-six percent (n=127) of cases diagnosed in Hawai`i in 2002 were pulmonary TB. Tuberculosis, however, is a systemic disease and can affect any area of the body. Fourteen percent (n=21) of cases had TB exclusively outside the lungs, or extra pulmonary TB. These cases may be harder to detect; patients may not show the typical TB signs and symptoms such as prolonged cough and abnormal chest x-ray. National TB data show that a slightly lower proportion, or 81%, of all cases reported in the US in 2002 were pulmonary (CDC, 2003).

Drug Resistance

The number of multi-drug resistant TB (MDR-TB), defined by CDC as resistance to two first-line drugs isoniazid (INH) and rifampin (RIF), is generally low in Hawai`i. In 2002, MDR-TB was found in 0.7% of all cases in Hawai`i, compared to a national MDR-TB estimate of 1.2% of all cases reported in the same year (CDC, 2003). However, the proportion of Hawai`i cases with any drug resistance has increased 83%, from 12 cases in 2001 to 22 cases in 2002.

TB and HIV/AIDS

TB-AIDS co-infection remains less common in Hawai`i than on the US mainland. In 2002, three TB cases in Hawai`i were co-infected with HIV, accounting for 2% of the total cases. In comparison, an estimated 8% of all TB cases diagnosed in the US in 2001 were co-infected with HIV (CDC, 2003). These cases are generally concentrated in large urban centers on the mainland.

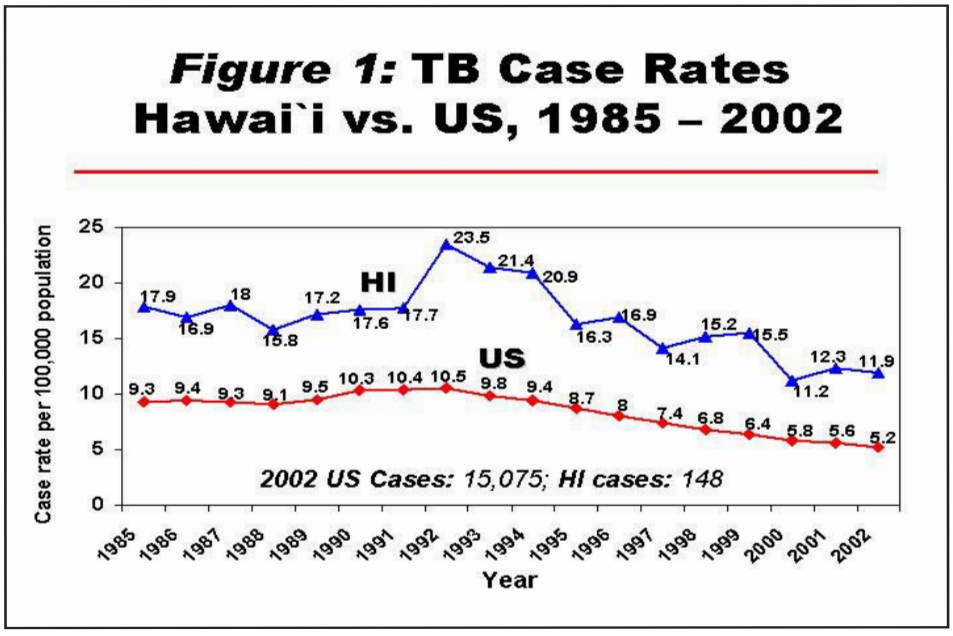
Effects of Immigration

Tuberculosis in Hawai`i is shaped by current and past patterns of immigration. In 2002, the US Immigration and Naturalization Service officially admitted over 3,400 new immigrants to Hawai`i, 67% of whom were from the Philippines (US Immigration and Naturalization Service, 2002). In the same year, 124 new TB cases, representing 84% of the state's morbidity, were in non-US-born individuals. In comparison, only 51% of all the active TB cases reported in the US in 2002 were non-US-born, although this percentage has steadily increased from 27% in 1992. Please note, however, that CDC counts persons born in the US territories such as Puerto Rico and the COFA nations as US-born.

Persons born in the Philippines accounted for the majority of Hawai`i's non-US-born cases, making up 63% of this group, followed by those born in the COFA nations (10%), and Viet Nam (7%) (see Figure 2). Individuals arriving from the COFA nations are exempt from the overseas health examination required of immigrants to the US, and thus are not actively screened for TB. These areas with a high TB incidence contributed to a greater percentage of Hawai`i's cases in 2002. Our targeted testing program has done screening in this group, as well as developed some health education materials for this at-risk population. Among all the TB cases reported in the US in 2002, the three largest non-US born groups included those from Mexico (25%), Philippines (11%), and Viet Nam (9%) (CDC, 2003).

Role of Immigrant Screening

Hawai`i's TB Control Program has



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a good working relationship with the Centers for Disease Control and Prevention's (CDC) Division of Global Migration and Quarantine office in Hawai`i. Honolulu is one of eight US cities with a Quarantine Station located at its airport. The Quarantine Station plays a key role in controlling the entry of communicable diseases into the US, including infectious TB. The staff pass along two important pieces of information to the TB Control Program in Hawai`i:

(1) Documentation from immigrants arriving in Hawai`i who have been designated TB Class A (active, infectious TB), Class B1 (active, non-infectious TB), and Class B2 (inactive TB) at the time of medical evaluation in their country of origin. This process facilitates follow-up of these cases.

(2) Chest x-rays from overseas medical examinations of most immigrants who enter Hawai`i, regardless of their TB class. TB program doctors review the x-rays for abnormalities that may be indicative of TB.

Due to this x-ray review and close follow-up of TB Class A and B immigrants, many of Hawai`i's cases are diagnosed soon after arrival; 37% of all non-US-born cases diagnosed from 1998 to 2002 in Hawai`i were diagnosed within the first year after arrival. In comparison, only 19% of all non-US-born cases reported in the US in 2002 were diagnosed within a year after arrival.

The Fight Continues…

Although TB morbidity has been decreasing, the State of Hawai`i still leads the nation in TB incidence. Since most of our cases are imported from other countries, the close relationship between Hawai`i's TB Control Program and the CDC Quarantine Station at the Honolulu airport is key in controlling the spread of TB in the state. This partnership is especially important as TB drug resistance increases globally.

About Hawai`i's TB Control Program:

The Hawai`i State TB Control Program provides TB screening, chest x-rays and all TB medications free of charge. In addition, clinical services including nurse and physician visits, directly observed therapy, and bilingual outreach in 11 different languages are available. Programmatic activities include the TB registry, surveillance/epidemiology, contact investigations, targeted testing, and health education. Several new research projects with the CDC have also been initiated in the last few years. The TB clinic has recently undergone a complete renovation, and now has a new state-of-the-art digital x-ray imaging system as well as areas of negative air pressure to decrease the chances of disease transmission.

For further information, please call 808-832-5731, or visit our web site at: *http://www.hawaii.gov/doh/resource/comm_dis/tb/index.htm*.

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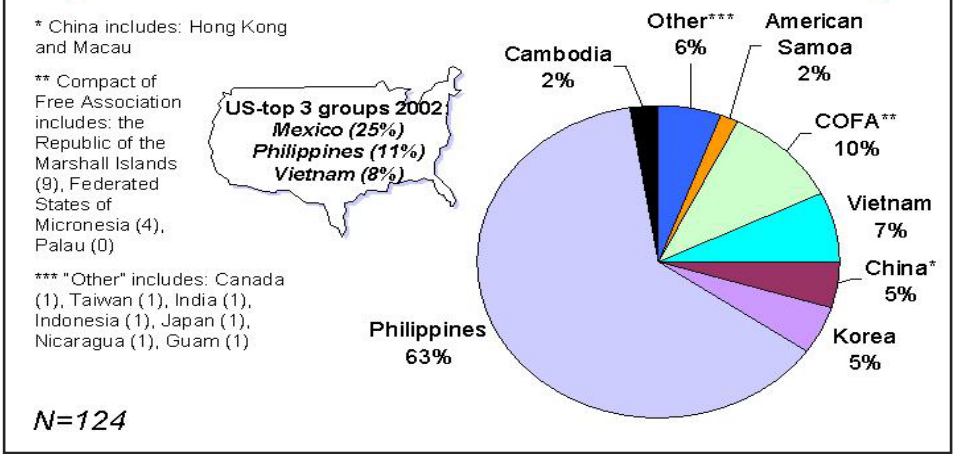
Figure 2: Non US-Born TB Cases by Place of Birth – Hawai`i, 2002



Improving Adult Influenza and Pneumococcal Vaccination Levels in Hawai`i

Vaccination of persons at risk for complications from influenza and pneumococcal disease is a key public health strategy in preventing morbidity and mortality in the United States. During the 1990–1999 influenza seasons, approximately 36,000 deaths/year were attributed to influenza infection, with approximately 90% of deaths occurring among adults ≥65 years of age (1). In addition, an estimated 3,400 deaths occurred in 1998 as a result of invasive pneumococcal disease in adults ≥65 years of age (2).

One of the national health objectives for 2010 is to achieve 90% coverage of non-institutionalized adults ≥65 years of age for both influenza and pneumococcal vaccine (objective 14-29) (3). In 2000, the national Advisory Committee on Immunization Practices (ACIP) expanded the universal recommendations for influenza vaccination to include adults 50–64 years of age.

To assess progress toward achieving the 2010 national health objectives and implementing the ACIP recommendations, the Centers for Disease Control and Prevention (CDC) analyzed data from the nationwide 2002 Behavioral Risk Factor Surveillance System (BRFSS) (4).

The CDC data analysis nationally indicated that in 2002, 36% of adults 50–64 years of age and 66% of adults 65 years of age had received influenza vaccine during the preceding year. Compared to these national averages, Hawai`i's influenza vaccination level for adults ≥65 years of age was significantly higher at 74% while the vaccination level of adults 50–64 years of age did not differ significantly (Table 1).

Nationally, 62% of adults ≥65 years of age reported having ever received pneumococcal vaccine. Hawai`i's pneumococcal vaccination level for adults 65 years of age was not significantly different at 60% (Table 1).

Hawai`i's influenza and pneumococcal vaccination levels have not increased significantly since the 1999 BRFSS survey (5,6). Both influenza and pneumococcal vaccination levels among adults 65 years of age were substantially below the 2010 national health objective of 90% coverage. (See Table 1).

Revised Standards for Adult Immunization Practices

More than a decade ago, standards were introduced to guide the delivery of immunizations for adults. Under the leadership of the National Vaccine Advisory Committee, the standards were recently revised (9). The revised standards listed below focus on making vaccines easily accessible, effectivelycommunicatingvaccination information, implementing strategies to improve vaccination rates and developing community partnerships to reach target patient populations. An electronic version of the Revised Standards for Adult Immunization Practices may be accessed through: www.cdc.gov/nip/recs/rev-immz-stds.

Make vaccinations available.

- Adult vaccination services are readily available.
- Barriers to receiving vaccines are identified and minimized.
- Patient "out-of-pocket" vaccination costs are minimized.

Assess patients' vaccination standards.

- Healthcare professionals routinely review the vaccination status of patients.
- Healthcare professionals assess for valid contraindications.

Communicate effectively with patients.

- Patients are educated about risks and benefits of vaccination in easy-to-understand language.

Administer and document vaccinations properly.

- Written vaccination protocols are available at all locations where vaccines are administered.
- Persons who administer vaccines are properly trained.
- Healthcare professionals recommend simultaneous administration of indicated vaccine doses.
- Vaccination records for patients are accurate and easily accessible.
- All personnel who have contact with patients are appropriately vaccinated.

Implement strategies to improve vaccination rates.

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- Systems are developed and used to remind patients and healthcare professionals when vaccinations are due and to recall patients who are overdue.
- Standing orders for vaccinations are employed.
- Regular assessments of vaccination coverage levels are conducted in a provider's practice.

Partner with the community.

- Patient-oriented and community-based approaches are used to reach the target population.

All health care providers vaccinating adults are encouraged to adopt the above standards in their practices. Successful strategies and downloadable forms for use in increasing coverage levels can be referenced at www.cdc.gov/nip/publications.

Hawai`i Adult Immunization Activities

In order to increase adult vaccination levels, the Hawai`i Immunization Branch (HIB) has partnered with a variety of private and public agencies, such as Hawai`i Medical Services Association (HMSA), Kaiser Health Foundation, Department of Health (DOH) Diabetes Control Program, Centers for Medicare and Medicaid, Aloha United Way, Hawai`i Immunization Coalition, vaccine manufacturers, Mountain Pacific Foundation for Quality Care, Hawai`i Primary Care Association and the Hawai`i Pharmacist Association. Some partnering activities to implement adult immunization strategies are listed here.

- Provision of adult influenza and pneumococcal vaccines to immunization providers working with uninsured at risk patients.
- Coordination of the DOH's involvement in the Senior Fair where a private physician group provides influenza and pneumococcal immunizations to Medicare Part B beneficiaries.
- Collaboration on public service announcements with the Pneumonia Task Force (membership includes key organizations interested in adult immunization).
- Collaboration with the Hawai`i Immunization Coalition to raise adult immunization rates and public awareness statewide.
- Assisting in coordination of the 'flu message' to assure vaccine availability on neighbor islands by working closely with HMSA, the largest health care insurer in the state.
- Assisting in publicizing flu/pneumococcal clinics to assure vaccine availability on O`ahu through a contract with Ask Aloha United Way 211, an information clearinghouse.
- Surveying providers interested in raising adult immunization rates in their practices. The HIB is working with the Hawai`i Primary Care Association to begin the education process of these targeted providers.

Adult Immunization Resources

The Association of Teachers of Preventive Medicine (ATPM) and the National Immunization Program (NIP)/CDC have released "Increasing Adult Vaccination Rates: What Works," an interactive instructional program on CD-ROM that offers primary-care providers strategies to increase vaccination rates among their adult patients. The CD-ROM features web links to appropriate resources, predominantly those on the NIP/CDC Web site.

The program is approved for two hours of Continuing Medical Education credit, 2.3 hours Continuing Nursing Education credit, and 0.2 hours Continuing Education units through CDC. WhatWorks can be ordered free of charge through ATPM at www.atpm.org.

Table 1: Percentage of persons aged 50-64 years and ≥65 years who reported receiving influenza vaccine during the preceding year and adults aged ≥65 years reported ever receiving pneumococcal vaccine – BRFSS, United States 2002.

	Influenza vaccination among adults aged 50-64 years		Influenza vaccination among adults aged ≥65 years		Pneumococcal vaccination among adults aged ≥65 years	
United States	**36.4%**	35.7-37.1% *	**66.4%**	65.6-67.1% *	**61.8%**	61.0-62.6% *
Hawaii	**36.7%**	33.2-40.2% *	**73.9%**	70.7-77.0% *	**59.5%**	55.9-63.2% *

* 95% confidence interval

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Additional information is available through ATPM, telephone (800) 789-6737, or by e-mail at whatworks@atpm.org. More information on adult immunizations may be found on the NIP/CDC Web site at: www.cdc.gov/nip.

More Hawai`i-specific information on immunization may be found at the DOH Web site at: www.vaxhawaii.com. The DOH Immunization Branch may also be contacted for both provider and general adult immunization information at (808) 586-8332 in Honolulu and 1-800-933-4832 on the neighbor islands.

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Leptospirosis Exposures: 1993-2002

Leptospirosis is a disease of mammals. Rodents are the primary reservoir. Humans are infected indirectly through exposure to water or soil contaminated by infected animal urine. The disease has been associated with taro farming, swimming and wading in contaminated streams and via ingestion of catchment water. Infection may also occur through direct contact with infected animal urine or tissues via exposure to domestic animals, pets or feral animals. A prominent risk factor is the presence of open skin wounds, which when exposed allows leptospires to penetrate.

Leptospirosis is most common in tropical areas with high rainfall. In Hawai`i, the two most prominent geographic areas reporting cases are the northeast (windward) coasts of the islands of Hawai`i and Kaua`i. Most of the cases are recreationally exposed. By gender adult males are the primary risk group. Historically two-thirds of the cases occur during July-December during school vacation and when the weather is warm. The Big Island reports the largest number of cases, while Kaua`i has the highest incidence rate. Leptospirosis is an under-recognized and under-diagnosed disease.

The Department of Health investigates all laboratory-documented cases of leptospirosis and attempts to document geographic exposure sites, when known. When identified, warning signs are posted. This article summarizes the frequency of exposures at specific sites on each island and the frequency of these water-borne exposures to the total number of cases diagnosed on each island.

O`ahu

Between 1993-2002, there were 76 cases of leptospirosis diagnosed on O`ahu. Of those 46 (61%) had known fresh water exposure (Table 1). Maunawili falls has become the most frequent exposure site. Exposures have occurred there since 1996, when the property owners allowed the Sierra Club to improve trail access to the falls. There is a particularly virulent strain of the organism there, as many cases exposed at Maunawili have had severe illness. Another unique aspect of the epidemiology of leptospirosis is that all the cases exposed in Kahana stream occurred in a two-year period; no cases have been

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reported from there in recent years.

Kaua`i

The island of Kaua`i has historically had the highest incidence rate of leptospirosis in the state (Table 2). During the 1993-2002 10-year period, there were 131 cases reported from that island. Of those, 105 (80%) had fresh water exposure. Kaua`i has two areas where cases have clustered over the years; the north shore (Kilauea-Hanalei) and the Waimea River. Both are popular water recreational areas. Most cases occurred on the north and east sides of the island.

Table 1. O`ahu Water

Stream	No. of Cases
Maunawili Stream/Falls	12
Kapena Falls (Nuuanu Stream)	10
Kahana Stream	6
Kahili Stream	4
Sacred Falls	4
Waiahole Stream	2
Green Valley Stream	1
Haleiwa Stream	1
Heeia Stream	1
Maakua Gulch	1
Manoa Stream	1
Palolo Stream	1
Pauoa Stream	1

Table 2. Kaua`i Water Exposures: 1993-2002

Stream	No. of Cases
Waimea River	21
Wailua River	17
Hanalei River	14
Hanapepe RIver	8
Kalihiwai River	8
Kalalau Stream	4
Huleia Stream	3
Kapahi Stream	3
Kilauea Stream	3
Kipu Falls	3
Wainiha Stream	3
Waioli Stream	3
Kapaa Stream	2
Makalea River	2

Hawai`i

The island of Hawai`i has historically reported the highest number of cases in the state. During an active surveillance study on this island during 1988-89,[1] it was estimated that 128 cases/100,000 persons contracted the disease there annually; many of whom were not diagnosed as leptospirosis. During 1993-2002, 178 cases were reported from the Big Island (Table 3). Of these, 58 (33%) had identifiable fresh water exposure. Clustering of cases over time has been consistently observed in Waipio valley and nearby communities. The majority of cases were exposed on the north and east sides of the island.

Maui

Maui presents an enigma regarding leptospirosis. Relatively few cases are reported from that island, although the geography of the island would suggest a higher incidence. Perhaps because the windward (rainy) side of that island is sparsely populated, fewer cases are diagnosed. In previous animal serologic studies conducted on the island,[2] the species sampled showed significant levels of infection.

Between 1993-2002, there were nine cases reported from Maui, and two from Moloka'i. Of the Maui cases, seven (78%) were exposed in fresh water sources. Two each were exposed in Oheo gulch (Seven Sacred Pools), Huelo, and Iao valley. The specific stream of the seventh case was unknown.

Table 3. Hawai`i Water Exposures: 1993-2002

Stream	No. of Cases
Waipio River	28
Other (single exposures)	14
Honolii River	4
Waimanu Stream	4
Wailuku River	4
Hakalau Stream	2

Summary

Because many residents and tourists are exposed to leptospirosis from recreational fresh-water activities, people should use precautions when hiking, wading or swimming in fresh water. Leptospires can readily enter the body through broken skin and the mucous membranes of the eye, nose and mouth. Waterproof bandages should cover any skin wounds or abrasions, and those swimming in streams should wear tight-fitting face masks. Diving into fresh water is not recommended. Prolonged fresh water exposure can also increase risk of exposure, as leptospires can penetrate through water-softened skin.

For more information, please call (808) 586-8356 on O`ahu, (808) 933-0912 on the island of Hawai`i, (808) 984-8213 on Maui and (808) 241-3563 on Kaua`i.

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Hepatitis C Program Update

Background

Hepatitis C is one of the most common chronic blood borne infectious diseases in the United States. Prevalence data from national studies report that 3.9 million Americans (1.8%) have been infected with the hepatitis C virus (HCV) and 2.7 million (1.2%) have chronic HCV infection. According to the Centers for Disease Control and Prevention (CDC), the majority of persons infected with HCV are yet to be diagnosed. Because these persons are anticipated to come to the attention of the medical community within the next decade, the number of American adults who are diagnosed with hepatitis C is expected to increase fourfold from 1990 to 2015. National data indicate high prevalence among persons who are uninsured or utilize public funded health care. High concentrations are also seen in prison populations, where approximately 18% are HCV-positive.

Updates in Treatment Recommendations

In June 2002, the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) convened a Consensus Development Conference on the management of hepatitis C to review the most recent developments regarding management, treatment options, increasing the spectrum of potential candidates for treatment, and to update the 1997 Consensus Statement. The panel's draft statement is posted on the web at http://consensus.nih.gov. The following is a summary of the key points highlighted in the consensus statement.

Given the improvement in treatment for hepatitis C, the CDC has recommended that all patients with chronic hepatitis C be considered potential candidates for antiviral therapy. Severe depression and other psychiatric disorders that cannot be pharmacologically managed may be a contraindication to treatment. However, treating these patients for HCV infection may be possible, if care is taken when selecting a psychotropic medication and close follow-up is maintained. Similarly, although many patients who have chronic hepatitis C have been ineligible for clinical trials because of injection drug use and/or significant alcohol use, these are not contraindications for treatment. Patients with co-existing substance use and hepatitis C should be referred to appropriate substance abuse and harm reduction programs. It is reasonable to assess all patients who have hepatitis C for possible HCV drug therapy and have an informed discussion about the potential advantages and disadvantages of treatment.

Treatment is recommended for patients who are at increased risk for cirrhosis. Signs that identify patients at risk include a detectable HCV RNA level of higher than 50 IU/ml. and a liver biopsy demonstrating portal or bridging fibrosis with least moderate inflammation and necrosis. Alanine aminotransferase (ALT) levels are also persistently elevated in the majority of these patients.

Therapeutic Goals

Sustained viral response (SVR) is currently the best indicator of effective treatment. An SVR is defined by the absence of detectable HCV RNA in the serum as shown by a qualitative HCV RNA assay with lower limit of detection of 50 IU/ml or less at six months after treatment. Early viral response (EVR), defined as a minimum two-log decrease in viral load during the first 12 weeks of treatment, is predictive of SVR and should be a routine part of monitoring patients with genotype 1. Patients, who fail to achieve an EVR at week 12 of treatment, have only a small chance of achieving an SVR even if therapy is continued for a full year.

Treatment Options

Treatment with pegylated interferon in combination with ribavirin results in a better response than pegylated interferon monotherapy or standard interferon and ribavirin. A 48- week course of combination therapy using pegylated interferon and ribavirin yields a sustained response rate of approximately 55 percent. A similar course of pegylated interferon monotherapy yields a sustained response rate of 35 percent. Factors associated with successful therapy using pegylated interferon in combination with ribavirin include:

- Genotypes other than 1
- Lower baseline viral levels

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- Less fibrosis or inflammation on liver biopsy
- Lower body weight or body surface area

Side Effects of Treatment

Major side effects of combination therapy include flu like symptoms, neuropsychiatric symptoms, and hematological abnormalities. Depression is common among people who have hepatitis and is also a frequent side effect of interferon treatment. All patients who are started on treatment should be assessed for depression before beginning antiviral therapy and monitored at each visit during treatment. Hematological conditions are uncommon, occurring in less than 2% of patients. In patients with persistent cytopenias, treatment with hematopoietic growth factors, (granulocyte colony-stimulating factor and granulocyte-macrophage colony-stimulating factor) may be useful and could prevent dose reduction or drug discontinuation.

Retreatment

Selected patients who failed to achieve an SVR from treatment given prior to the availability of pegylated interferon may benefit from retreatment with pegylated interferon-based regimens. Decisions regarding re-treatment should be based on:

- Previous type of response
- Previous therapy and the difference in potency of the new therapy
- Severity of the underlying liver disease
- Viral genotype and other predictive factors for response and
- Tolerance of previous therapy and adherence

"Relapsers" are patients who achieve an initial end of treatment response (ETR), but this is not sustained over time. "Non-responders" are patients who never achieve an ETR nor an SVR. Only 15 – 20 percent of non-responders who were treated with standard interferon-ribavirin combinations achieve an SVR on re-treatment using pegylated interferon with ribavirin. Knowing the severity of the underlying liver disease is important in recommending re-treatment. Patients who have advanced fibrosis or cirrhosis are at increased risk for hepatic decompensation and should be considered for re-treatment.

Patients Who Have Mild or Advanced Liver Disease

Progression to cirrhosis is likely to be slow in patients who have persistent ALT elevations but no fibrosis and minimal inflammatory changes. These patients may not need treatment and should be monitored periodically. In some cases, referral to a hepatologist for liver biopsy screening may be warranted. Among patients who have advanced liver disease, SVR rates are lower than in those patients who do not. Liver transplantation offers the primary treatment option for patients with decompensated liver disease.

Patients Who Use Drugs and/or Alcohol

All patients who want and need treatment for drug and alcohol abuse should be referred for such services and those who use injection drugs should be referred to methadone treatment programs whether or not they're receiving treatment for hepatitis C. Methadone treatment is not a contraindication to treatment. A history of alcohol abuse is not a contraindication to therapy; however, continued alcohol use during therapy adversely affects response to treatment, and alcohol abstinence is strongly recommended before and during treatment.

Patients Who are HIV Positive

All persons who are infected with HIV should be screened for HCV infection. Patients who have chronic hepatitis C and concurrent HIV infection may have an accelerated course of hepatitis C.

Vaccination Against Hepatitis A and Hepatitis B

All patients who have chronic hepatitis C should be vaccinated against hepatitis A and hepatitis B.

Hepatitis C Reporting in Hawai`i

Hepatitis C became a reportable disease in Hawai`i in 1997 and is on the list of notifiable diseases to be reported by all health care providers and clinical laboratories to the Department of Health (DOH). Cumulative data from 1997 – 2002 indicate that physicians, laboratories and other health care facilities have reported over 5,000 positive hepatitis C tests to the DOH. Applying the national prevalence rate of 1.8%, this number is thought to be an under-representation of approximately 20,000 people who could be infected with hepatitis C.

Health care providers who need to report a positive hepatitis C test to the DOH need to complete the Communicable Disease Report Form

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and send it to:

O'ahu: PO Box 3378
Honolulu, HI 96801
Phone: (808) 586-4586
Fax: (808) 568-4595

Maui: 54 High Street
Wailuku, HI 96793
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For more information, please call (808) 733-9010 in Honolulu.

REFERENCES

1. Management of hepatitis c: 2002 NIH Consensus Statement. 2002, June 10-12; 19(1):1-44. http://consensus.nih.gov/cons/116/Hepc091202.pdf.
2. American Academy of Family Physicians. 2003 Scientific Assembly. Treating and monitoring hepatitis C. Summary of the June 2002 National Institute of Diabetes and Digestive and Kidney Diseases Consensus Development Conference on the Management of Hepatitis C.

Submitted by Karla Hays, M.N., M.P.H., Hepatitis C Prevention Coordinator, STD/AIDS Prevention Branch, Communicable Disease Division.

Renovation of Lanakila Tuberculosis Clinic: A state-of-the-art facility

In many jurisdictions, tuberculosis (TB) control has been neglected with diminished funding, support and interest. The Hawai`i State TB Control Program is fortunate to be supported by the Governor, the state legislature, health partners, community, and the Centers for Disease Control (CDC) as it aggressively addresses the state's high TB morbidity.

The Celebration

After fifteen months, the Lanakila Tuberculosis Clinic returned from temporary quarters to its completely renovated 13,000 square foot headquarters in Lanakila Health Center in Kalihi. A dedication ceremony celebrated on August 7, 2003 began with a Hawaiian chant by local storyteller, Makia Malo. Dr. Chiyome Fukino, Director of the Hawai`i State Department of Health (DOH), hosted the ceremony with distinguished guests, including Dr. Kenneth Castro, Assistant Surgeon General, U.S. Public Health Service and Director of the Division of Tuberculosis Elimination, Centers for Disease Control and Prevention (CDC), State Representatives Dennis Arakaki and Felipe Abinsay, State Senator Suzanne Chun-Oakland and staff from Honolulu Councilman Romy Cachola's office. The Honorable U.S. Representative Neil Abercrombie gave poignant remarks highlighting the dedication of the U.S. Public Health Service in protecting the health of the public and reminded the invitees of Hawai`i's strength in diversity and commitment to caring for all its residents.

Several hundred people enjoyed the festivities that included tours, Hawaiian story telling, local food and entertainment. All local television news stations were present to record the event.

Highlights of the Renovation

The celebration showcased over three years of detailed planning to develop a model TB Clinic for screening and treatment. Two capital improvement bills totaling over $3 million dollars were approved in 2000 by the Hawai`i State Legislature and former Governor Ben Cayetano to completely renovate the TB clinic and procure a digital X-ray imaging system. The TB Program worked closely with the National Institutes of Occupational Safety and Health to optimize infection control features. Highlights of the renovation include:

- Dual TB Clinics: The Screening Clinic and Chest Clinic are separated with independent ventilation and air conditioning systems to prevent potential mixing of air between low-risk and high- risk populations.
- Negative Air Pressure Clinic: The entire Chest Clinic (including all waiting rooms, examination rooms) is under negative air pressure and is serviced by a one-pass ventilation system that exhausts hepa filtered air externally.

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Renovation

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These engineering controls are augmented by the use of stand-alone hepa filters and wall mounted ultraviolet germicidal irradiation lamps that offer optimal infection control for clients and staff.

- Computed radiography: A complete digital X-ray and image database system was installed. This state-of-the-art system offers rapid processing of X-rays; decreases radiation exposure for clients and staff, and eliminates the need for film, chemical processing and storage of analog films for the approximately 16,000 X-rays taken annually. It increases the ease of computer access, manipulation, interpretation, and storage of electronic images.
- The Bishop Museum installed a permanent exhibit chronicling the history of TB in Hawai`i (done in partnership with Le`ahi Hospital and the American Lung Association of Hawai`i). The exhibit presents a timeline from January 1778 when Captain Cook brought two shipmen with TB to Waimea, Kauai. In the early 20th century, TB sanatoriums and preventoriums were established on each island before widespread use of lung collapse therapy, surgery, and antibiotics.
- The Hawai`i State Art Museum's Art in Public Places Programs loaned over 20 pieces of original art, including paintings, statues, photographs, and ceramics from local artists for display in public areas throughout the clinic. Thomas Deir, another local artist, loaned several of his pieces for display.

CDC Support and Participation

Visitors from CDC's Division of TB Elimination met with the Pacific Island Health Officers Association, Pacific Resources for Education and Learning, and Hawai`i State TB laboratory staff. Dr. Zachory Taylor, Chief of CDC's Field Services and Evaluation Branch, provided in-service education to TB Branch staff. Dr. Castro was the featured speaker in a presentation on international TB issues, which was teleconferenced live to Bangkok from Tripler Army Medical Center. In partnership with the American Lung Association of Hawai`i and Hawai`i Thoracic Society, Dr. Castro also inaugurated the new TB conference room with a presentation on the new ATS/CDC/IDSA TB Treatment Guidelines to large group of physicians and nurses.

The CDC team also reviewed program data with local personnel; Dr. Jessie Wing, CDC Medical Officer and Hawai`i TB Control Branch Chief, Jason Nehal, CDC Public Health Advisor and DOH staff in Honolulu, Maui and the Big Island. The TB Program is concluding a two-year CDC supported study on "Improving Contact Investigations in Foreign-born Populations" and a successful five year Targeted Testing Program that has identified latent and active TB cases among high-risk populations. The Hawai`i TB Control Branch is one of 22 US/Canadian sites in the CDC TB Epidemiologic Studies Consortium and will soon be participating in three research projects.

The team visit was capped off by an enlightening visit to Kalaupapa settlement for Hansen's Disease (HD) on the island of Moloka`i. Close collaboration with the HD Branch is helpful since HD and TB have similar at-risk populations in Hawai`i and the Pacific region.

Looking Toward the Future

The Hawai`i TB Control Branch plans to build on the momentum afforded by this event to maintain a high profile in the community and with the legislature. The program will continue to work with its partners to promote engagement, collaboration, and funding to advance the goals of tuberculosis elimination. Ninety-three years after the Hawai`i Bureau of Tuberculosis was established, the Hawai`i TB Control Branch is proud to have a cutting edge facility to develop more responsive, progressive, and pro-active initiatives for Hawai`i and the Pacific region in the 21st century.

Submitted by: R. Blair, R. Silva, D. Thai, J. Nehal, J.S. Wing, Tuberculosis Control Branch, Communicable Disease Division.

Current Flu Recommendations

An early 2003-04 flu season in the United States accompanied by an unusually high and persistent demand for vaccine has resulted in a decreasing supply of trivalent inactivated vaccine. In response, the Centers for Disease Control and Prevention (CDC) has issued interim recommendations for influenza vaccination this season as follows:

Vaccination

- Emphasis should be placed on targeting trivalent inactivated vaccine to persons at high risk for complications from influenza: healthy children aged 6–23 months, adults aged ≥65 years, pregnant women in their second or third trimester during influenza season, and persons aged ≥2 years with underlying chronic conditions.

- Persons at high risk should be encouraged to search locally for vaccine if their usual health-care provider no longer has vaccine available.

- All children at high risk, including those aged 6–23 months, who report for vaccination should be vaccinated with a first or second dose, depending on vaccination status. Doses should not be held in reserve to ensure that two doses will be available.

- Next priority should be given to vaccinating those persons at greatest risk for transmission of disease to persons at high risk, including household contacts and health-care workers.

- Healthy persons aged 5–49 years should be encouraged to be vaccinated with intranasally administered live, attenuated influenza vaccine.

- Decisions about vaccinating healthy persons, including adults aged 50–64 years, with inactivated influenza vaccine should be made on a case-by-case basis, depending on local disease activity, vaccine coverage, feasibility, and supply.

Hygiene

- Good respiratory hygiene should be encouraged, including cleaning of hands, and staying at home when symptomatic with fever and respiratory illness.

Medications

- On December 17, 2003, CDC issued interim recommendations on the use of antiviral medications for influenza during the 2003-04 influenza season (see http://www.cdc.gov/flu/professionals/antiviralguid.htm).

For further information on influenza, see http://www.cdc.gov/flu/ or call the Hawai`i Immunization Program at (808) 586-8300.

Communicable Disease Report

Communicable Disease Division 586-4580
Tuberculosis Disease Control Branch 832-5731
Hansen's Disease Control Branch 733-9831
STD/AIDS Prevention Branch 733-9010
STD Reporting 733-9289
AIDS Reporting 733-9010
Disease Outbreak Control Division 586-4586
Disease Investigation Branch 586-4586
Immunization Branch 586-8300
Bioterrorism Preparedness and Response Branch 587-6845
Information & Disease Reporting 586-4586
After-hours Emergency Reporting 247-2191
After-hours Neighbor Island Emergency Reporting 800-479-8092

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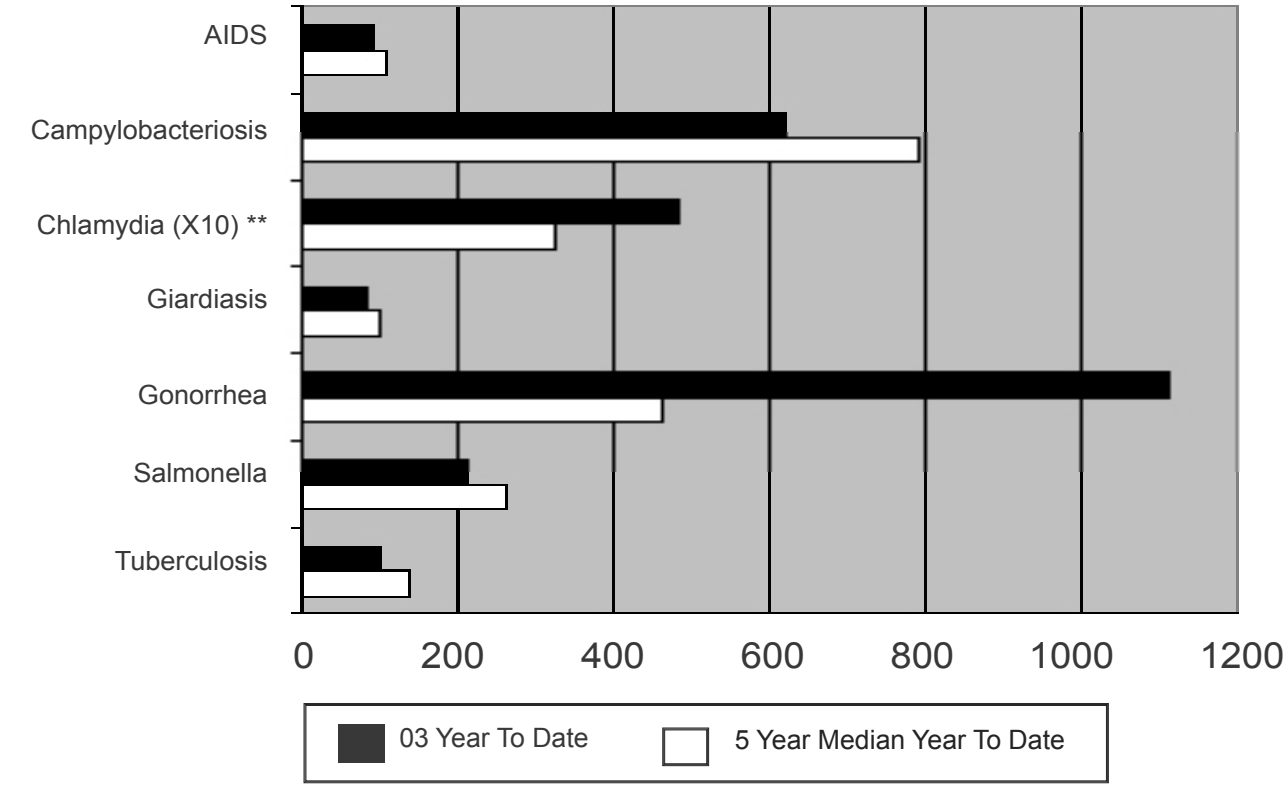
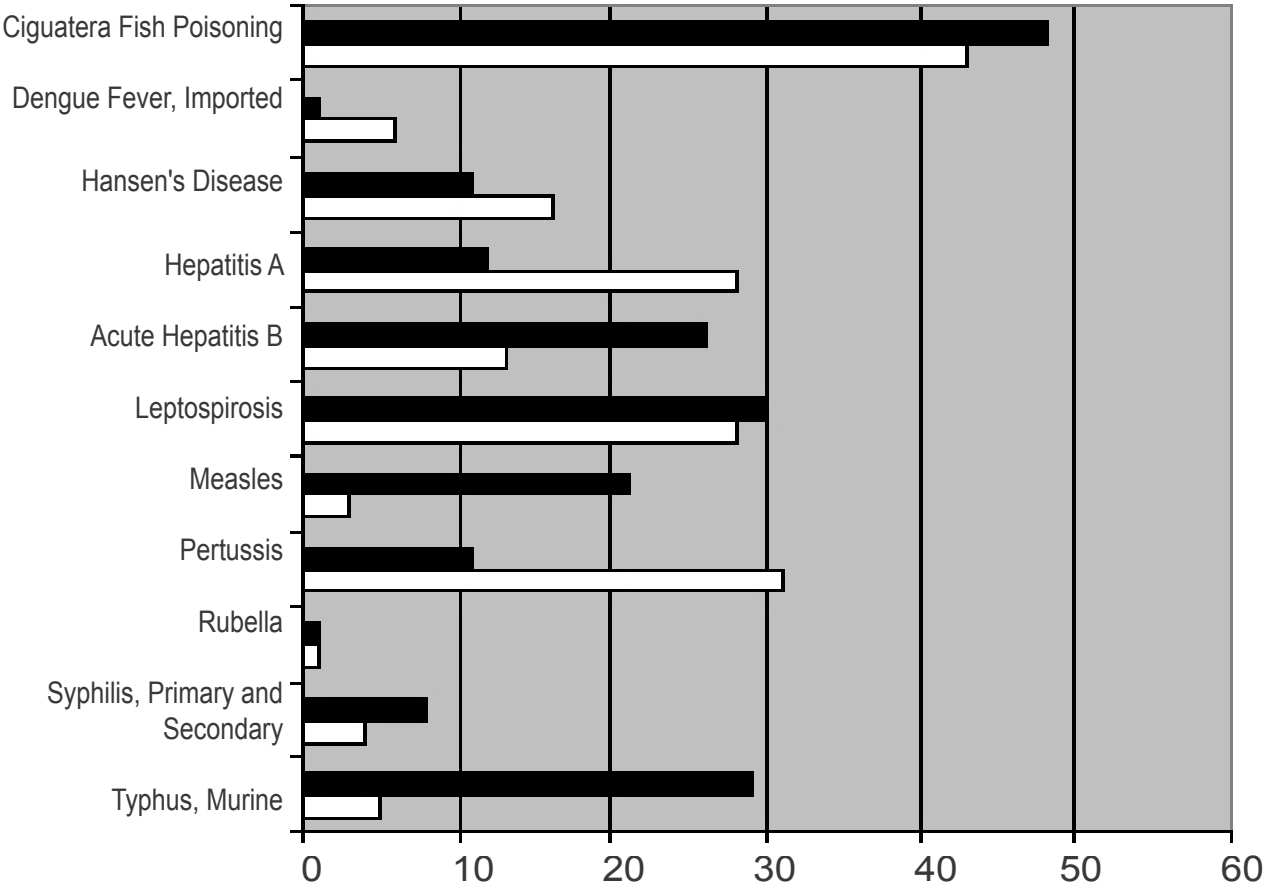
Communicable Disease Surveillance

Selected Diseases by Year of Report*
Hawaii, 2003 Year-to-date through November





* These data do not agree with tables using data of onset or date of diagnosis.
** The number of cases graphed represent 10% of the total number reported